**Table S2.** List of 77 genes in our custom panel associated to hypertrophic and restrictive cardiomyopathies

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| AARS2 | Alanine--tRNA ligase, mitochondrial |
| ACAD9 | Acyl-CoA dehydrogenase family member 9, mitochondrial |
| ACADVL | Very long-chain specific acyl-CoA dehydrogenase, mitochondrial |
| ACTA1 | Actin, alfa 1, skeletal muscle |
| ACTC1 | Actin, alpha cardiac muscle 1 |
| ACTN2 | Alpha-actinin-2 |
| AGK | Acylglycerol kinase, mitochondrial |
| AGL | Glycogen debranching enzyme |
| ALPK3 | Alpha-protein kinase 3 |
| APOA1 | Apolipoprotein 1 |
| ATPAF2 | ATP synthase mitochondrial F1 complex assembly factor 2 |
| BAG3 | BAG family molecular chaperone regulator 3 |
| BRAF | Serine/threonine-protein kinase B-raf |
| CAV3 | Caveolin 3 |
| COA5 | Cytochrome c oxidase assembly factor 5 |
| COA6 | Cytochrome c oxidase assembly factor 6 homolog |
| COQ2 | 4-hydroxybenzoate polyprenyltransferase, mitochondrial |
| COX15 | Cytochrome c oxidase assembly protein COX15 homolog |
| COX6B1 | Cytochrome c oxidase subunit 6B1 |
| CSRP3 | Cysteine and glycine-rich protein 3 |
| DES | Desmin |
| DLD | Dihydrolipoyl dehydrogenase, mitochondrial |
| ELAC2 | Zinc phosphodiesterase ELAC protein 2 |
| FHL1 | Four and a half LIM domains protein 1 |
| FHL2 | Four and a half LIM domains 2 (FHL-2) |
| FHOD3 | FH1/FH2 domain-containing protein 3 |
| FLNC | Filamin-C |
| FOXRED1 | FAD-dependent oxidoreductase domain-containing protein 1 |
| FXN | Frataxin, mitochondrial |
| GAA | Lysosomal alpha-glucosidase |
| GFM1 | Elongation factor G, mitochondrial |
| GLA | Alpha galactosidase A |
| GYG1 | Glycogenin-1 |
| HFE | Hereditary hemochromatosis protein |
| HRAS | GTPase HRas |
| JPH2 | Junctophilin 2 |
| KLHL24 | Kelch-like protein 24 |
| KRAS | GTPase KRas |
| LAMP2 | Laminin subunit alpha-2 |
| LDB3 | LIM domain-binding protein 3 |
| LIAS | Lipoyl synthase, mitochondrial |
| LZTR1 | Leucine-zipper-like transcriptional regulator 1 |
| MAP2K1 | Dual specificity mitogen-activated protein kinase kinase 1 |
| MAP2K2 | Dual specificity mitogen-activated protein kinase kinase 2 |
| MLYCD | Malonyl-CoA decarboxylase, mitochondrial |
| MRPL3 | 39S ribosomal protein L3, mitochondrial |
| MRPL44 | 39S ribosomal protein L44, mitochondrial |
| MRPS22 | 28S ribosomal protein S22, mitochondrial |
| MTO1 | Protein MTO1 homolog, mitochondrial |
| MYBPC3 | Myosin-binding protein C, cardiac-type |
| MYH7 | Myosin Heavy Chain 7 |
| MYL2 | Myosin regulatory light chain 2, ventricular/cardiac muscle isoform |
| MYL3 | Myosin light chain 3 |
| MYOZ2 | Myozenin 2 |
| MYPN | Myopalladin |
| NF1 | Neurofibromin |
| NRAS | GTPase NRas |
| PLN | Cardiac phospholamban |
| PMM2 | Phosphomannomutase 2 |
| PRKAG2 | 5'-AMP-activated protein kinase subunit gamma-2 |
| PTPN11 | Tyrosine-protein phosphatase non-receptor type 11 |
| RAF1 | RAF proto-oncogene serine/threonine-protein kinase |
| RIT1 | GTP-binding protein Rit1 |
| SCO2 | Synthesis Of Cytochrome C Oxidase 2 |
| SHOC2 | SHOC2 Leucine Rich Repeat Scaffold Protein |
| SLC22A5 | Solute Carrier Family 22 Member 5 |
| SLC25A3 | Solute Carrier Family 25 Member 3 |
| SLC25A4 | Solute Carrier Family 25 Member 4 |
| SOS1 | SOS Ras/Rac Guanine Nucleotide Exchange Factor 1 |
| SURF1 | SURF1 Cytochrome C Oxidase Assembly Factor |
| TMEM70 | Transmembrane Protein 70 |
| TNNC1 | Troponin C1, Slow Skeletal And Cardiac Type |
| TNNI3 | Troponin I3, Cardiac Type |
| TNNT2 | Troponin T2, Cardiac Type |
| TPM1 | Tropomyosin 1 |
| TRIM63 | Tripartite Motif Containing 63 |
| TTR | Transthyretin |